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THE SMELL AND SOUND OF SALES

The effects of scent and music on the shopping experience of showroom visitors under various levels of arousal

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MASTER THESIS

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Abstract

Objective. The aim of this study was to examine whether congruence or incongruence between music and scent affected the consumer responses positively. Studies in the past have shown that sensory cues such as music, scent and colors, positively affect the shopping experience (Matilla & Wirtz, 2001; Milliman, 1982; Yalch & Spangenberg, 1990). Moreover, congruence or incongruence between sensory cues can strengthen or weaken the positive effects (Mandler, 1982). Important is the level of incongruence, because too much incongruity could affect the shopping experience negatively. In this study both congruent and incongruent conditions were included that affected the shopping experience.

Method. This study executed the combinations between music and scent (in)congruence in a 2 (low arousal music vs. high arousal music) x 3 (no scent vs. low arousal scent vs. high arousal scent) experimental design. With this experimental design it was examined which combination of music and scent (congruent or incongruent) affected the consumer responses the most positively. These consumer responses consisted of the variables: emotional state, evaluation of the store environment and products, amount of time spent in the store and intention to revisit. 'Processing fluency' was considered as a mediator in this experimental research. The experiment took place in two large showrooms with garden furniture in Almelo and Amersfoort. The data was obtained through a virtual reality (VR) study and a survey. In the VR environment the participants found themselves in a specific part of the store and heard the low or high arousal music through the build-in speakers from the VR glasses. During the VR experience, a low arousal, high arousal scent or no scent was diffused. In the end, 179 participants completed the survey about their virtual shopping experience.

Results. This study showed that incongruence between scent and music affected the consumer responses the most positive. Thus, the incongruent conditions provided the highest mean scores on emotional state, evaluation of the store and products and intention to revisit. Of the two incongruent conditions, the condition low arousal scent/high arousal music affected the shopping experience the most positive. Moreover, retailers must avoid the congruent condition low arousal scent/low arousal music, because this showed the least positive consumer responses.

Conclusion. Incongruence in comparison to congruence between scent and music affects the consumer responses for the visitors of the showrooms more positively. So, a combination between low arousal scent and high arousal music will lead to the most pleasant shopping experience. Whereas a congruence between low arousal scent and low arousal music leads to the least pleasant experience. These findings are of theoretical relevance but also provide retailers from practical advice for their showrooms.

Keywords: scent, music tempo, congruence, shopping experience, sensory marketing, consumer responses

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1. Introduction

First time walking into a store like Abercrombie and Fitch or Victoria Secret is an experience. People look around and do not know where to watch. There are bright lights, screens with videos and loud music. For both stores just mentioned, there is also a strong fragrance diffused. Even on Google, people are asking which perfume is diffused in the store because they want to have the same perfume. Indeed, that is the goal that stores like Victoria Secret have: a better shopping experience that people will remember, even when they come home after a day of shopping.

For both scent and music there are different types of marketing, for instance not all the stores use the same kind of scent marketing (Akbari, 2013). It is possible to divide scent marketing into three categories: product scenting (changing and perfecting the smell of a real product), advertisement scenting (the perfume pages in magazines) and ambient scenting. In this study the focus will be on ambient scenting, which means that a scent is used to produce a certain positive association with the store. Kees Smit, a store that specializes in selling garden furniture, is curious how to make the shopping experience for their customers as optimal as possible for their visitors. The garden furniture that is sold does not have a product scent. Therefore, it is possible to diffuse an ambient scent in the large garden furniture showroom. Currently, radio music is played but the disadvantage of music from a radio station is the possibility of exposing visitors to advertisements of competitors.

Much research is done into the effects of sensory marketing, but in many cases it was only focused on one sensory cue: music, scent, light, et cetera. However, several exceptions focus on the interactions between sensory cues. In the study of Matilla & Wirtz (2001) both music and scent were researched in a field setting: a small gift shop. In this research there were congruent and incongruent conditions, based on their level of high or low arousal. For music, a distinction was made between slow and fast tempo music. An essential oil reference book was used to select a relaxing and stimulating scent, which resulted in the scent lavender (low arousal) and the scent grapefruit (high arousal). This research showed that when scent and music are congruent based on their level of arousal, the consumers rated the environment of the store more positive. Also, other consumer responses like pleasure, approach behaviors, perceived positivity of the store environment, impulse buying and satisfaction were more positive than when exposed to the incongruent arousal conditions.

According to Gulas & Bloch (1995), diffused scents affect different consumer responses like the evaluation of the store environment and towards the products that are sold. Even when the products in the store do not have a strong product scent, the consumer responses will be affected. However, incongruence does not always affect the consumer responses negatively. The schema incongruity theory suggests that when a person who is confronted with stimuli that are incongruent with earlier

expectations, this person will engage in more extensive information processing (Eroglu, Machleit & Chebat, 2005). Also, Mandler (1982) suggests that the process of responding to congruence or incongruence could produce an effect of arousal which will influence people's responses and evaluations. It is important to find out whether congruity or incongruity leads to the most positive responses and evaluations. Concerning this, a person will react more emotional to slight incongruity compared to severe incongruity that is also unsuccessful in accommodation. This is because, under a slight incongruent situation, the certain element increases the arousal, and therefore leads to favorable evaluations of for example the products in the store. In the end, it is important in this study to achieve moderate inconsistency, so that the affective value will be as positive as possible.

The store atmosphere, which can be influenced by scents, music and other sensory elements, is an important aspect of the shopping experience (Doucé et al., 2016). This study will be performed at a company with large showrooms with garden furniture in Almelo and Amersfoort. Because this company does not make use of scent and music marketing, it makes it possible to measure any change when changing the music and the scent in the showroom. There is a clear starting point where nothing has been done or tried. This shows the practical relevance for this study. As mentioned before, a lot is known about individual sensory stimuli, but not many researched how they might interact and whether to aim for incongruence or congruence. Therefore, this study will also be of theoretical relevance. This study will be about the combination between of two sensory cues music and scent in a new setting: a garden furniture showroom.

This study focuses on the effect of music and scent on the shopping experience of showroom visitors under different levels of arousal (low vs. high arousal). Previous studies have been performed regarding the effect of scent (Spangenberg, Crowley & Henderson, 1996; Doucé & Janssens, 2013) or music (Milliman, 1982; Yalch & Spangenberg, 1990) on consumer responses. This study is relevant because it is of added value to the existing literature about sensory cues like music and scent in a retail setting and also an addition to the increasing literature about the interaction between sensory cues. Also, studies like this where ambient scents are being used are less common (Gulas & Bloch, 1995). The outcomes of this study will also provide managers in similar large store environments knowledge about how music and scent can be optimally used under various levels of arousal.

The goal of this study is to examine whether the congruence or incongruence between music and scent will affect the consumer responses positively. Therefore, an experimental 2 (low arousal music vs. high arousal music) x 3 (no scent vs. low arousal scent vs. high arousal scent) research design is used. The research question for this experiment is:
"To what extent does congruence or incongruence between scent and music affect the consumer responses?"

2. Theoretical framework

In this theoretical framework, the independent variables 'scent' and 'music' will be described. Also, there will be an introduction of the dependent variables: emotional state, evaluation of the store environment, evaluation of the products, amount of time spent in the store and intention to revisit. Also, the aspect sensory cues in a store environment will be clarified in this theoretical framework.

2.1 Olfaction research

A human breathes around 17.280 to 25.920 times a day (CMA Science, 2016). The main respiratory structures span the nasal cavity to the diaphragm. The nose plays a major role in breathing, but this also is the same for smelling. According to Lindstrom (2005) around 75% of our emotions are influenced by smell and scents. Bosmans (2006) states that scents - in contrast to other sensory cues that are processed in higher level brain centers- are first directly processed in the limbic system. It is the part of the brain that is involved in emotions, learning, motivation, sexual behavior and memories. Moreover, olfaction, the sense of smell, is seen as an emotional sense. This is the reason that when a person smells apple pie it reminds him or her of visiting grandmother, even if it was a long time ago.

The focus in this study will be on ambient scents. Spangenberg (1996) states that an ambient scent is a scent that is not coming from a specific object but is present in the environment. Even responses towards stores and its products that have no intrinsic fragrance, can be affected by the ambient scents (Gulas & Bloch, 1995). An ambient scent can be acknowledged as an affective cue that leads to following consumers' evaluations (Bosmans, 2006). Diffusing a pleasant ambient scent that matches with the product or store setting is often used to create pleasant shopping experiences (Doucé et al., 2016). In a showroom an ambient scent could affect perceptions of the store and its products, including those products that are difficult to scent like garden furniture. Ambient scents can be distinguished with nonambient scents, but still research towards ambient scents has been less common (Gulas & Bloch, 1995).

The positive effects of pleasant ambient scents are shown by various studies. These effects are on different consumer responses (e.g.): experienced pleasure, evaluations of the store environment and products, amount of time spent in the store and the intention to revisit the store (Spangenberg, Crowley & Henderson, 1996; Doucé & Janssens, 2013). These consumer responses will be included in this study. However, other scholars showed diverse results concerning the effect of ambient scents on consumer responses (Spangenberg, et al. 1996; Morrin & Ratneshwar, 2000). This is caused by the possible difference in experiment settings, because depending on the products in the stores the effects of the ambient scent may differ. For example, the scent of flowers might work in a flower shop but may not be appropriate for a tattoo shop.

According to Spangenberg, Grohmann & Sprott (2005) atmospheric cues can be matched based on for example season: Christmas music and scent. Or matched on the arousal high- vs. low-arousing music and scent (Mattila & Wirtz, 2001). Important is the intensity of both scent and music, because it affects different consumer responses. In the study of Sherman, Mathur & Smith (1997) pleasure and arousal positively influenced the amount of money spent, but the amount of time spent in the store was only determined by the emotional state of the consumer. According to Baker, Levy & Grewal (1992) consumers spent more time in stores, when the stores are high in arousing qualities. The reason is because consumers notice it as more interesting. In their study, music and light were used as the two ambient stimuli that interacted with each other. The reason is because consumers notice it as more interesting. However, the optimal arousal theory suggests that when making little changes in the store environment, it will lead to an increase in the environments' novelty and pleasantness. These small changes can be adding a low amount of scent or playing a background music (Berlyne, 1971).

When diffusing an ambient scent, different factors play a role. First, scent literature shows that the ambient scent should be pleasant to produce the desired consumer responses (Spangenberg et al. 1996). Second, Bosmans (2006) states that there needs to be a congruence between the scent and the products which are sold in the store to make sure to produce desired consumer responses. How higher the level of congruence with the product, the stronger the semantic connections will be. For example, the smell of roses may activate memory concepts of Valentine's day. As third, congruence between an ambient scent and another sensory cue could lead to these positive consumer responses. Last, Engen (1982) states that the most important attribute of an ambient scent is its pleasantness or unpleasantness.

To make a distinction between all the existing scents, various scholars divided them under different categories. Spangenberg et al. (1996) divided scents in five categories: floral, spices, woods, citrus, and mints. In the study of Edwards (2014), four scent categories are used: floral notes, fresh notes, woody notes and oriental notes. According to Spangenberg et al. (1996) scents in the categories citrus and mints are evaluated as more pleasant and arousing than the other scent categories. Even more, the scent lemon was evaluated as the most pleasant one. The scents can be divided under the four scent categories of Edwards (2014). Most of the scents are in the category fresh, followed by oriental, woody and floral. When looking into a fragrance wheel, the fresh and oriental scents are opposite each other. The same is for woody and floral scents. Based on these findings it is hypothesized that:

H1: The presence of a high arousal scent in comparison with a low arousal scent will have a positive influence on the consumers' emotional state (a), evaluation of the store environment (b) and products (c), amount of time spent in the store (d) and intention to revisit (e).

2.2 Music research

The second ambient stimuli in this study is music. In addition to the commercial interests, the role of music in consumer research is of theoretical importance (North & Hargreaves, 1998). Various studies show that music in retail settings can affect consumer behaviour (Milliman, 1982; Yalch & Spangenberg, 1990). The focus in those studies were for example on time spent in the store (Milliman, 1982; Yalch & Spangenberg, 1988), congruence with sold products (North, Hargreaves & McKendrick, 1999; Vida, Obadia & Kunz 2007), congruence with other ambient stimuli like scents (Matilla & Wirtz, 2001) and the effect of different types of music on sales (Areni & Kim, 1993; Yalch & Spangenberg, 1993).

According to Bruner (1990) any musical composition is composed of three primary dimensions. First, physical dimension which consist out of volume, pitch, tempo and rhythm. Second is emotional tone. And third, preferential dimension which is the degree to which the shopper likes the played music. The first dimension is about tempo, which in music is often measured in beats per minute (BPM). According to Berlyne (1971) fast tempo music (high bpm) has more arousal potential than slower music (low bpm), because more actions occur within a single same time frame.

The study of Andersson et al. (2012) explored whether music played in retail environment affects consumer behavior, using gender as moderator. The results showed that female consumers were more positive when exposed to the environments without music or slow tempo music, and male consumers were more positive when exposed to the environment with music (slow or fast tempo). Also, the study showed that music has a negative effect on the level of satisfaction, however the participants increased their average ticket in an environment with music.

Milliman (1982) showed the effect of background music on shopping behaviour in a grocery store. In this study there was a no music, slow tempo music and fast tempo music condition. The study showed that shoppers who were exposed to slow music, spent 38% more time in the store in contrast to the other conditions. Because of the slow music, their pace slowed. Also in this study, the number of sales were consistent with slow tempo music while lower sales were related with high tempo music. Consequently, it is hypothesized that:

H2: The presence of low arousal music in comparison with high arousal music, will have a positive influence on the consumers' emotional state (a), evaluation of the store environment (b) and products (c), amount of time spent in the store (d) and intention to revisit (e).

2.3 Interactions between sensory cues

Ambient scents can be congruent or incongruent with the store atmospherics. Congruent scents are scents which consumers expect in a specific setting because the scent and the setting match.

(Spangenberg et al., 2006). The ambient scent can act as a primer, which means that once the consumer smells the scent, it can start the automatic activation process knowledge. The scent activates stored knowledge, making certain concepts temporarily more accessible. As a result of this, ambient scents increase the accessibility of attitudes and memories consumers have with the store. For example, Spangenberg et al. (2006) showed that a masculine ambient scent diffused in a men's clothing department, improves consumers' evaluations of and approach behaviour toward men's clothing as compared to the presence of a feminine ambient scent and vice-versa. However, the same study showed that an incongruent scent can also lead to cognitive interference, because the information that is activated by the scent is incongruent with the product. Diffusing an incongruent perfume based on gender, leads to more positive evaluations than no scent.

In the study of Jacob, Guéguen, Boulbry & Sami (2009) the music was changed in a flower shop. Three conditions were present. The first music was the congruent condition: love songs. The second one was pop music, which is often played in flower shops. And third, there was a control condition and therefore no music. The results of this study show that the amount of money spent in the flower shop was significantly higher with the congruent condition (love songs) compared with the other conditions. Therefore, we can state that congruence leads to higher sales. Not only congruence between store and music leads to more positive consumer responses. The study of Matilla & Wirtz (2001) shows that when an ambient scent and music are congruent with each other, consumers evaluate the environment more positive, show higher levels of approach and impulse buying behavior and are more satisfied than when the environmental cues were incongruent.

However, according to Mandler (1982) there are several outcomes of congruity and incongruity in terms of values and affective intensity. First, congruity between conditions will result in a positive affective value but with no intensity. Second, slight incongruity results in a positive affective value with a higher intensity. Third, severe incongruity can result positive or negative depending on whether the accommodation is successful. When the accommodation is successful, the result of the severe incongruity will be positive with a high intensity. But when accommodation is unsuccessful the affective value will have a negative outcome. To put it briefly, congruity will have a positive outcome, but the intensity of this affective value is not high. To achieve this higher affective value incongruity is necessary: slight or severe. For severe incongruity there is a change that the outcome will be negative. Therefore, within this study there will be strived for moderate incongruence for a positive affective value. Therefore, it is hypothesized that:

H3: Moderate incongruence (high vs. low arousal) between music and scent in contrast to congruence, will have a more positive influence towards the consumers' emotional state (a), evaluation of the store environment (b) and products (c), amount of time spent in the store (d) and intention to revisit (e).

Not only the congruence between two or more environmental cues play a role, also the age of the visitors can affect the consumer responses. In a study of Yalch & Spangenberg (1988) visitors of a clothing store where exposed to foreground music which was youth-oriented (top 40) and background music which was adult-oriented (instrumental). The result was that the younger visitors, under 25, felt that they had shopped longer when they were exposed to background music (adult) and the other way around for older visitors. Because the time spent in the store was not measured, it was not proven if their feelings were real. Yalch & Spangenberg (1998) concluded that unfamiliar music might adversely influence the visitor's time perceptions.

In a similar study of Gulas & Schewe (1994), baby boomers felt that they had shopped longer when exposed to familiar classic rock compared to unfamiliar big band music. The same study suggests a relationship between a consumers' characteristic and music (familiarity) and the actual and perceived amount of time spent in the store. Familiar music, in contrast to unfamiliar music, can ensure that visitors spend less time in the store but perceive themselves as spending more. This is the negative effect, because the perceived time needs to be lower than the actual time. This effect is something which will be taken into account during this study but will not be involved in the research model.

2.4 Mediating role of processing fluency

Sensory marketing can be an effective way of marketing to engage the consumers in the store environment (Doucé et al., 2016). Different characteristics of the environment of a store can influence the shopping behaviour of the consumer. These characteristics can be for example colors, music, ambient scents, lighting and crowdedness. Important is that consumers not only perceive one of these characteristics, but a large number of sensory cues (Adams & Doucé, 2017). To catch these signals, Doucé & Janssens (2013) state that consumers use five senses: sight, sound, scent, touch and taste. Because the consumers use all these senses, the store environment plays a major role in the shopping experience. Important is that consumers do not perceive stimuli separate but as a whole. When people respond to their environment holistically, they perceive stimuli as a total which determines their responses towards the environment (Bitner, 1992). Also, in this study it is important to keep in mind that consumers at Kees Smit perceive different independent stimuli in a holistic pattern.

To process the sensory cues in the store environment, fluency an important factor. Processing fluency can be described as the experienced ease of processing a stimulus, in this case a sensory cue (Schwarz, 2004). The main belief of this theory is that people internally control the amount of effort they spent on a mental process. When they subjectively experience the ease of processing, it will give people an approachable feeling. The basics of the process fluency theory are used over the last years in marketing research. The theory has been applied to for example logos (Janiszewski & Meyvis 2001), product labels (Labroo, Dhar & Schwarz, 2008) and advertisements (Labroo & Lee 2006; Lee & Labroo 2004). According to Hermann, Zidansek, Sprott & Spangenberg (2013), there are no further researches that

explore the effects of fluency in the domain of scent. Still in 2018, no further research has been done towards these effects. Based on these findings it is hypothesized that:

H4: Processing fluency mediates the effect of music/scent (in)congruence on consumers' emotional state (a), evaluation of the store environment (b) and products (c), amount of time spent in the store (d) and intention to revisit (e).

2.5 Research design

In this study, two independent variables will be examined. These independent variables are 'music' and 'scent'. These independent variables could influence the dependent variables: emotional state, evaluation of the store environment and products, amount of time spent in the store and intention to revisit. In Figure 1, the research model is shown. In this model, the dependent and independent variables are presented. Also, the mediator 'processing fluency' is considered in this experimental research.

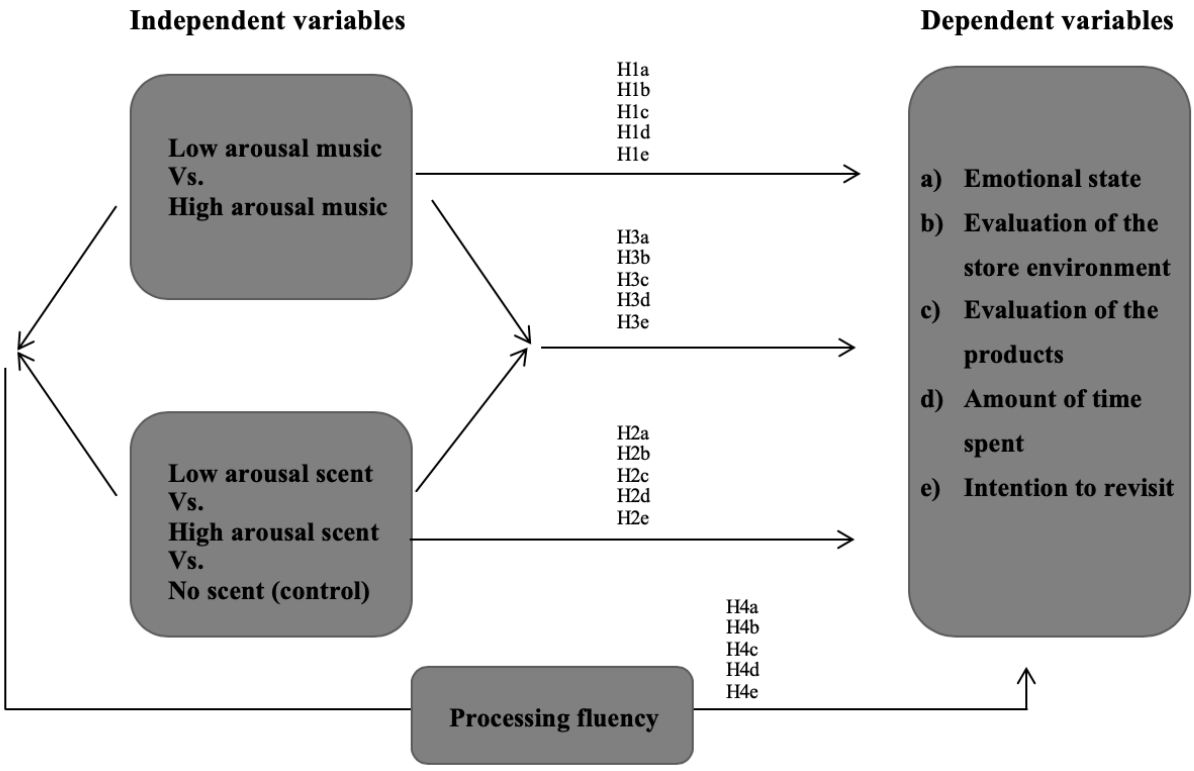

Figure 1. Research model

3. Pre-study scent and music

In this pre-study, two pre-tests were conducted to examine which scents and songs should be used for the main study. Which scent and music are regarded as high and low arousal, were emerged from the two pre-tests.

3.1 Pre-test scent

Method

In order to select a low and high arousal scent, 18 different scent aromas were obtained. The scents differ in their fragrance notes, from lemon to musk and from vanilla to watermelon. The 18 scents can be found in Appendix I and are all applicable in the aroma diffusers that Kees Smit already owns.

In total, 25 respondents participated in the pre-test. The group contained 15 females (60%) and 10 males (40%) with an average age of 31.4 years (*SD* = 9.55). Also, from the 25 participants, 5 participants (20%) smoke. During the experiment, the participants smelled the 18 different scents randomly. For each scent, questions about arousal (six items) and pleasure (five items) were asked, for example: Relaxed-Stimulated and Desperate-Hopeful. Also, a one-item question about pleasantness was asked: 'How pleasant did you like this smell?'. All the items were 5-point Likert scales and can be found in Appendix I.

Results

When comparing the 18 different scents, the results show that White Tea (*M* = 2.72, *SD* = 0,89) scores the lowest on arousal and can be seen as the low arousal scent. For high arousal, this would be the scent with the highest mean: Classic Spice (*M* = 4.15, *SD* = 0,49). However, before choosing these scents for the main study, the pleasantness of these scents needs to be compared. On pleasure, Classic Spice (*M* = 3.93, *SD* = 0,78) has a comparative score with the low arousal scent Cherry Blossom (*M* = 3.85, *SD* = 0,69). Therefore, Cherry Blossom will be the low arousal scent and Classic Spice the high arousal scent for the main study.

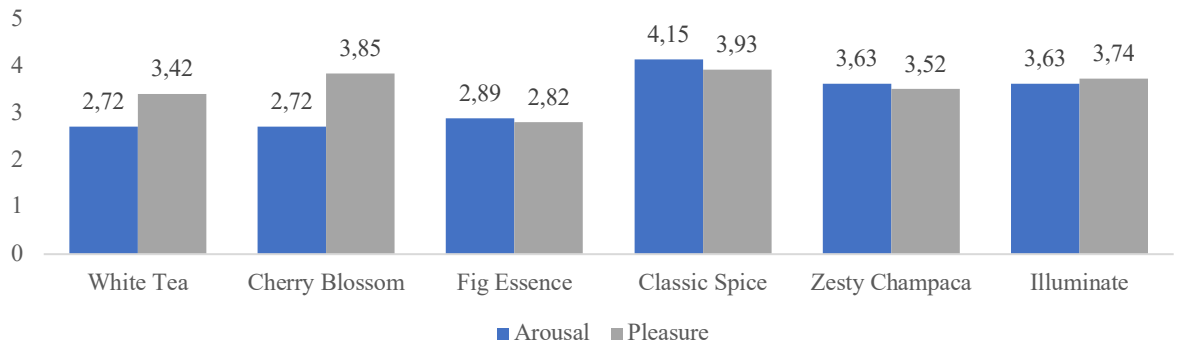

Figure 2. Mean Scores Scents on Arousal and Pleasure

Last, a paired-samples t-test was conducted to compare the difference in arousal for the condition Classic Spice and the condition Cherry Blossom. For arousal, there was a significant difference in the scores for Classic Spice (*M* = 4.15, *SD* = .49*)* and Cherry Blossom (*M* = 2.73, *SD* = .78); t (24) = -6.88, *p* = .00). Subsequently, the same test was carried out to compare the difference in pleasure for the two scents. There was not a significant difference in the scores for Classic Spice (*M* = 3.93, *SD* = .78*)* and Cherry Blossom (M= 3.93, SD= .69); t (24) = -.36, *p* = .72).

3.2 Pre-test music

Method

In order to select low and high arousal music, 18 songs were chosen from different Spotify music lists depending on their tempo (BPM). Nine songs were chosen from the list ’75 BPM’ and the other nine from lists with a tempo around 150 bpm. The 18 songs can be found in Appendix II.

In total, also 25 respondents participated in the pre-test for music but with a few other participants than with the pre-test scent. The group contained 15 females (60%) and 10 males (40%) with an average age of 31.8 years (*SD* = 9.28). During the experiment, the participants listened to the 18 different songs. Each song was played for approximately 30 seconds. For each song, questions about arousal (six items) and pleasure (five items) were asked, these were the same items as for the pre-test scent. Also, a one-item question about the familiarity with the song was asked: ‘How familiar are you with this song?’. All the items were 5-point Likert scales and can be found in Appendix II.

Results

When comparing the 18 different songs, the results show that ‘Geronimo’ (*M* = 4.15, *SD* = .46) scores the highest on arousal and can be seen as the high arousal song. On pleasure, ‘Geronimo’ has a mean score of 3.87 (*SD* = 0,65). A song that scores low on arousal and about the nearly the same on pleasure is ‘Ordinary People’. Comparing the low arousal song, ‘Ordinary People’ has one the highest mean scores on pleasure (*M* = 3.56, *SD* = 0.96). Also, on arousal, ‘Ordinary People’ scores low (*M* = 2.69, *SD* = .64). Therefore, Ordinary People from John Legend will be the low arousal song and Geronimo from Sheppard the high arousal song for the main study.

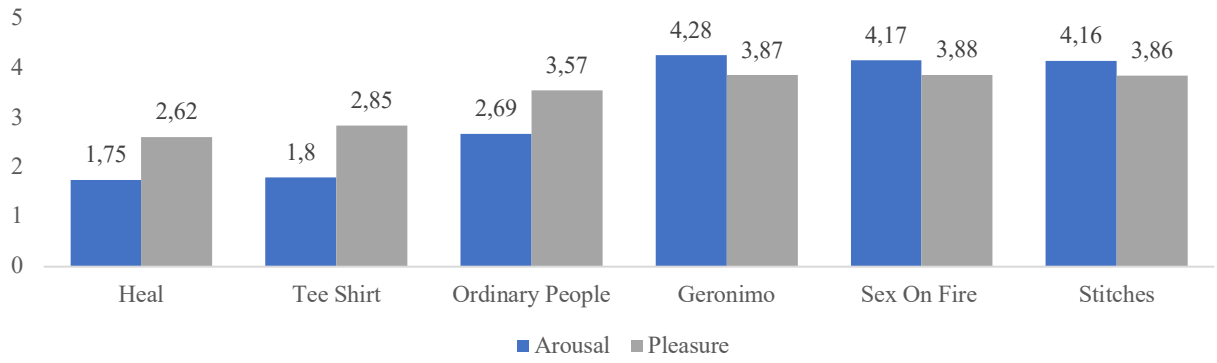

Figure 3. Mean Scores Songs on Arousal and Pleasure

Last, a paired-samples t-test was conducted to compare the difference in arousal for the condition Geronimo (high bpm) and the condition Ordinary People (low bpm). There was a significant difference in the scores for Geronimo ($M = 4.3$, $SD = .46$) and Ordinary People ($M = 2.7$, $SD = .64$); t (24) = 12.48, $p = .00$). Subsequently, the same test has carried out to compare the difference in pleasure for the two song. There was not a significant difference in the scores for Geronimo ($M = 3.9$, $SD = .65$) and Ordinary People ($M = 3.6$, $SD = .69$); t (24) = 1.41, $p = .17$)

4. Method main study

4.1 Research design

In this study, two independent variables will be examined. These independent variables are 'music' and 'scent'. The combination of these variables will result in two congruent and two incongruent conditions, based on their level of arousal. These independent variables could influence the dependent variables: emotional state, evaluation of the store environment and products, amount of time spent in the store and intention to revisit. In Figure 4, the research model is shown. In this model, the dependent and independent variables are presented. Also, the mediator 'processing fluency' is considered in this experimental research.

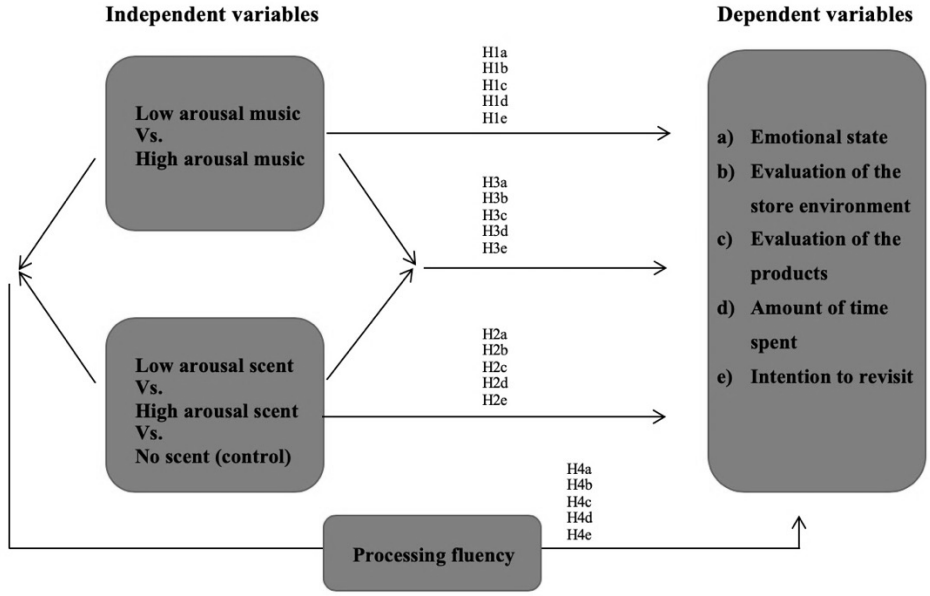

Figure 4. Research model

As shown in Figure 4, this study executed the combinations between scent and music (in)congruence in an experimental 2x3 design, which creates in total 6 different conditions. For scent there is a control condition, were no scent is being diffused. However, a control condition for music was not preferred for Kees Smit because of the working atmosphere for their sales employees and staff in the showroom. The 6 different conditions of this experimental research are further visualized in Table 1.

Table 1
Visualization experiment

		Scents		
		Low arousal scent	**High arousal scent**	**No ambient scent**
Music	**Low arousal music**	Condition 1 N = 31	Condition 2 N = 31	Condition 3 N = 30
	High arousal music	Condition 4 N = 28	Condition 5 N = 30	Condition 6 N = 30

4.2 Participants

The sample population included Dutch male and female visitors of the two showrooms in Almelo and Amersfoort. In total there were 179 participants, consisting of 82 males (45.8%) and 97 females (54.2%). The average age was 37.23 years (*SD* = 12.81) in the age range of 21 to 73 years. Moreover, the most common level of education of the participants was HBO (51.4%), followed by MBO (27.4%) and WO (14.5%). The income of the participants is mainly modal (40.2%) and a group of 15 participants would rather not share their income. Furthermore, the majority of the participants (87%) do not smoke. The demographic characteristics of the participants for each variable are shown in Table 2.

Table 2
Demographic characteristics of the participants per condition

		Condition 1		**Condition 2**		**Condition 3**		**Condition 4**		**Condition 5**		**Condition 6**	
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Gender	Male	13	42	15	48	16	52	10	36	13	43	16	53
	Female	18	58	16	52	14	48	18	64	17	57	14	47
Smoking	Yes	5	16	4	13	2	7	7	25	2	7	3	10
	No	26	84	27	87	27	93	21	75	28	93	27	90
Level of education	Vmbo/mavo	2	6.5	2	6.5	2	6.9	1	3.6	2	6.7	0	0
	Havo/vwo	0	0	0	0	1	3.4	1	3.6	0	0	1	3.3
	Mbo	10	32.3	6	19.4	7	24.1	8	28.6	9	30	9	30
	Hbo	15	48.4	20	64.5	9	31	14	50	16	53.3	18	60
	Wo	4	12.9	3	9.7	10	34.5	4	14.3	3	10	2	6.7
Income	Below modal	12	38.7	8	25.8	8	27.6	5	17.9	12	40	4	13.3
	Modal	11	35.5	13	41.9	11	37.9	14	50	11	36.7	12	40
	Above modal	5	16.1	9	29	9	31	4	14.3	7	23.3	9	30
	No answer	3	9.7	1	3.2	1	3.4	5	17.9	0	0	5	16.7
Total		31	100	31	100	29	100	28	100	30	100	30	100

The number of participants for each condition is between 28 and 31. The average age for condition 1 was 35.9 years (*SD* = 12.50), for condition 2 it was 34.58 years (*SD* = 11.30) and for condition 3 it was 37.76 years (*SD* = 13.87). Moreover, the average age for condition 4 was 40.89 years (*SD* = 15.14), for condition 5 it was 36.6 years (*SD* = 12.08) and last for condition 6 it was 37.23 years (*SD* = 12.81). The ANOVA showed that the average ages between the different groups were statistically different [$F(5,173) = .834$, $p = .53$).

4.3 Procedure

The experiment was carried out in the showroom of Kees Smit in Almelo and Amersfoort. The target group were visitors of the Tuintrend event on 23 and 24 february in Almelo and 2 march in Amersfoort. To perform this study, preparation was necessary to test the six different conditions. For the VR glasses, an environment of the Kees Smit showroom (Almelo) was made by the BMS lab. Two different scenes were made: scene 1 and scene 2. In both scenes there was a path where the participants could go from the outside of the showroom towards the cushion wall on the ground floor. By clicking on the remote control, the participant goes further into the showroom and can see the showroom in 360 degrees. By turning around, the participant can also leave the store again along the path. The difference between the scenes was the music: scene 1 included 'Sheppard – Geronimo' and scene 2 'John Legend – Ordinary People'. For the scent, a small aroma diffuser was used to diffuse the low and high arousal scent around the table where the experiment took place. When no scent was diffused, the aroma diffuser was not placed on the table.

The benefits of this VR study are that all participants walked around in the same part of the showroom. Also, the participants heard the different songs from the VR glasses with built-in speakers and the time spent in the VR is recorded by the VR glasses. Last, the participants no longer know what is happening at the event and are in their own bubble.

After the preparations, the experiment was carried out. The visitors walked through the showroom of Kees Smit and were approached and asked to participate in the study. When the participants agreed, they were instructed about how the VR glasses worked. After experiencing the showroom in VR, they were informed about the questionnaire and asked if they wanted to fill in the questionnaire. When agreeing with the requirements, the participant filled in the questionnaire at the table.

The six conditions were divided over the three event days, thus two conditions for each day. On day one in Almelo, condition 1 and 4 were tested. For day two in Almelo, these were condition 2 and 5. Last, for day three in Amersfoort the conditions were condition 3 and 6. For each day the procedure went the same, only in Amersfoort no scent was diffused in the store because the conditions only contained music. After the VR experience and completing the questionnaire, the participants gave their questionnaire back to the researcher and continued their day at the event.

4.4 Measurement constructs

In the main research, several variables will be measured. In this paragraph, the measurement of these variables will be described. Moreover, the measurement scales that are used in this experimental research were obtained from existing literature.

Pleasure

The first variable 'pleasure was measured by five-items on a 5-point semantic differential scale (α = .85). For example: 'Rate your emotions according to the way the virtual store environment made you feel', with 1= unhappy and 5 = happy. The aim was to measure the respondents' affective reaction to the virtual store environment with the attention on its degree of pleasantness. The scale is obtained from the PAD Emotional State Model, which is used to describe and measure emotional states by three dimensions: pleasure, arousal and dominance (Mehrabian & Russell, 1974).

Arousal

The second variable 'arousal' was measured by six-items on a 5-point scale (α = .81). For example: 'Rate your emotions according to the way the virtual store environment made you feel', with 1=relaxed and 5 = stimulated. The aim was to measure the respondents' affective reaction to the virtual store environment with the attention on its degree of arousal. The scale is obtained from the PAD Emotional State Model, which is used to describe and measure emotional states by three dimensions: pleasure, arousal and dominance (Mehrabian & Russell, 1974).

Dominance

The third variable 'dominance' was measured by four-items on a 5-point scale (α = .72). For example: 'Rate your emotions according to the way the virtual store environment made you feel', with 1 = influenced and 5 = influential. The aim was to measure the degree to which respondents are in control or not in the virtual store environment. The scale is obtained from the PAD Emotional State Model, which is used to describe and measure emotional states by three dimensions: pleasure, arousal and dominance (Mehrabian & Russell, 1974).

Evaluation of the store environment

The fourth variable 'evaluation of the store environment' was measured by thirteen-items on a 5-point scale (α = .94). For example: 'How did you find the store environment?', with 1 = unattractive and 5 = attractive. The aim was to measure the respondents affectively-laden evaluation of the virtual environment's atmosphere (Fisher, 1974; Spangenberg, Crowey & Henderson, 1996).

Evaluation of the products

The fifth variable 'evaluation of the products' was measured by seven-items on on a 5-point scale (α = .84). For example: 'How did you find the products in the store environment?', with 1 = bad and 5 = good. The aim was to measure the respondents affectively-laden evaluation of the products within the virtual environment (Bellizzi, Crowley & Hasty, 1983; Spangenberg et al., 1996).

Evaluation of the music

The sixth variable 'evaluation of the music' was measured by five-items on a 5-point scale (α = .89).

For example: What do you think of the background music you heard in the virtual store environment?', with 1 = unpleasant and 5 = pleasant. The aim was the measure the respondents affectively-laden evaluation of the background music within the virtual environment.

Evaluation of the scent

The seventh variable 'evaluation of the scent' was measured by five-items on a 5-point scale (α = .94). For example: What do you think of the scent you smelled in the virtual store environment?', with 1 = negative and 5 = positive. The aim was the measure the respondents affectively-laden evaluation of the scent within the virtual environment.

Amount of time spent

The eighth variable 'amount of time spent' was measured by the estimated time spent and the actual time. The estimated time spent was measure by the question: 'How much time do you think you have spent in the simulated store (give us your best estimate without looking at your watch)?'. The actual time spent in the virtual environment was measure with the VR glasses.

Intention to revisit

The ninth variable 'intention to revisit' was measured by one-item, 5-point scale. The question was: 'Assuming you are looking for products such as those sold in this store and you had the money, how likely would you visit the store again?', with 1 = very unlikely and 5 = very likely (Spangenberg et al., 1996).

Processing fluency

The tenth variable 'processing fluency' was measured by five-items on a 5-point scale (α = .88). For example: 'Studying the virtual store environment was', with 1 = unclear and 5 = clear. The aim was to measure the ease with which information is processed by the respondents (Graf, Mayer & Landwehr, 2017).

In Table 3, an overview of the Cronbach's Alpha's and the number of items for each construct is shown. All constructs have a Cronbach's Alpha higher than .7, which resembles reliable measurement constructs (Cortina, 1993).

Table 3
Measurement constructs: reliability scores, mean scores, standard deviations values and items

Measurement construct	**Cronbach's Alpha**	**Mean (SD)**	**Items**
Pleasure	.85	3.78 (.66)	1. Unsatisfied - Satisfied 2. Desperate – Hopeful 3. Bored – Relaxed

			4. Unhappy – Happy
			5. Irritated - Glad
Arousal	.81	3.46	1. Sluggish – Frenzied
		(.63)	2. Calm – Excited
			3. Sleepy – Wide awake
			4. Dull - Jittery
			5. Not aroused - Aroused
			6. Awed - Important
Dominance	.72	3.18	1. Submissive – Dominant
		(.65)	2. Cared for – In control
			3. Guided – Autonomous
			4. Influenced – Influential
Evaluation of the store	.94	3.67	1. Unattractive - Attractive
environment		(.66)	2.Tense – Relaxed
			3. Uncomfortable - Comfortable
			4. Gloomy - Cheerful
			5. Colorless – Colorful
			6. Negative - Positive
			7. Boring - Fascinating
			8. Monotonous - Lively
			9. Demotivating - Motivating
			10. Not interesting - Interesting
			11. Unpleasant – Pleasant
			12. Closed – Open
			13. Dull - Clear
Evaluation of the products	.84	3.92	1. Bad – Good
		(.53)	2. Unpleasant – Pleasant
			3. Unfavorable – Favorable
			4. Low quality - High quality
			5. Unattractive - Attractive
			6. Bad price - Good price
			7. Outdated - New
Evaluation of the music	.89	3.86	1. Unattractive - Attractive
		(.73)	2. Unpleasant – Pleasant
			3. Displeasing- Enjoyable
			4. Negative - Positive
			5. Non-stimulating -Stimulating
Evaluation of the scent	.94	3.60	1. Unattractive – Attractive
		(.83)	2. Unpleasant – Pleasant
			3. Displeasing- Enjoyable

			4. Negative – Positive 5. Non-stimulating -Stimulating
Amount of time spent	.78	2.27 (1.17)	1. Estimated time spent (in minutes) 2. Actual time spent (in minutes)
Intention to revisit	*	4.16 (.74)	1. Assuming you are looking for garden furniture and / or accessories and you have had money; how likely would you visit the store again?
Processing fluency	.88	3.73 (.73)	1. Difficult - Easy 2. Uneven - Fluent 3. Incomprehensible - Understandable 4. Unclear - Clear 5. Strenuous - Effortless

** No Cronbach's Alpha was possible for this variable*

5. Results

In this chapter, the results of this study will be described. In the first paragraph there will be a manipulation check. In the second paragraph, the preliminary analysis will be carried out. In the third paragraph, different multivariate analysis of variance (MANOVA) tests are performed. In the fourth paragraph, the results of the univariate ANOVA tests are described. In the fifth paragraph there will be a regression analysis. Last, the overview of the tested hypotheses will be given.

5.1 Manipulation check

The first manipulation check for the main study was the level of arousal of the scent in the showroom of Kees Smit. To ascertain the participants' perceptions of the arousal of the scent during the experiment, an ANOVA was carried out. For the manipulation check, ANOVA showed that there is a statistically significant effect between the low arousal, high arousal and no scent conditions [F (2,176) = 4.56 p = .01], with the high arousal condition being perceived as significantly more arousing (M = 3.64, SD = .63) than the condition without a scent (M = 3.31, SD = .48). However, ANOVA showed a marginally significant effect between the low and high arousal scent [F (1,118) = 2.83, p = .09]. Still, the mean scores on arousal for the conditions are as expected: the lowest mean on arousal for the no scent conditions and the highest mean for the high arousal scent conditions.

Table 5
ANOVA Scent and arousal

	Low arousal scent			**High arousal scent**			**No scent**		
	N	M	SD	N	M	SD	N	M	SD
Arousal	59	3.44	.74	61	3.64	.63	59	3.31	.48

Second, a manipulation check was carried out for the perceived music in the showroom of Kees Smit. ANOVA showed that there is a statically significant effect between the music conditions, [F (1,177) = 64,080, p = .00], with the high arousal condition being perceived as significantly more arousing (M = 3.80, SD = .58) than the low arousal condition (M = 3.14, SD = .51).

Table 6
ANOVA Music and arousal

	Low arousal music			**High arousal music**		
	N	M	SD	N	M	SD
Arousal	91	3.14	.51	88	3.80	.58

5.2 Preliminary analysis

A preliminary analysis will be carried out to investigate the effect of diffusing a scent (both low and high arousal) in comparison to the no scent conditions. Specifically, the ANOVA confirms which dependent variables were affected by conditions with low arousal scent, compared to no scent, and which dependent variables were affected by conditions with the high arousal scent.

Initially, an ANOVA was executed concerning the effect of low arousal scent compared to no scent on the dependent variables within this study. For the dependent variables processing fluency, arousal and evaluation of the product, no significant effects were found between low arousal and no scent. However, for evaluation of the store [F (1,116) = 15,361, p = .00], pleasure [F (1,177) = 9.081 p = .00] and dominance [F (1,177) = 8.426, p = .01] a significant effect was found.

Subsequently, an ANOVA was executed concerning the effect of high arousal scent compared to no scent on the dependent variables within this study. For all the dependent variables, a significant effect was found between the conditions with high arousal scent and no scent. The one-way ANOVA shows that only for the variable 'dominance' no significant effect was found [F (1,116) = 9.081, p = 0.25].

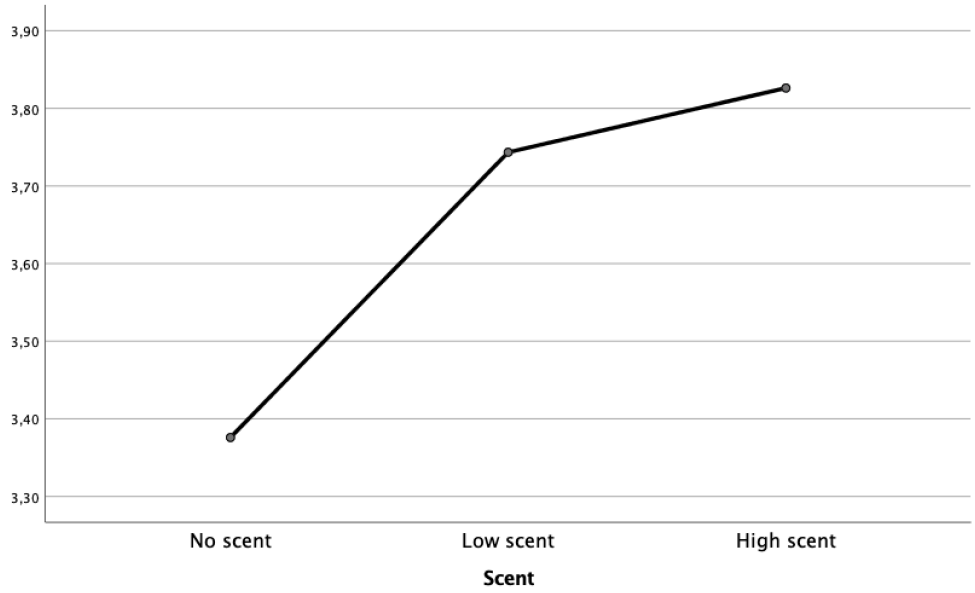

Figure 5. Means scores of the dependent variables on the different scent conditions

Altogether, the dependent variables 'evaluation of the store', 'pleasure' and 'dominance' are affected between condition with low arousal scent compared to no scent. Specifically, diffusing low arousal scent affects the shopping experience of people on these three different variables significantly compared to no scent. However, when high arousal scent is compared with no scent, a significant effect was found on all dependent variables except for the variable 'dominance'. Figure 5 shows the mean scores of the outcomes of the two ANOVA tests, where the three different conditions are compared.

5.3 MANOVA

A MANOVA test, 2 (low arousal music vs. high arousal music) x 2 (low arousal scent vs. high arousal scent) was performed for all dependent variables within this study. These dependent variables are: emotional state, evaluation of the store environment and products, amount of time spent in the store and intention to revisit. Furthermore, the mediator variable 'processing fluency' is included within the analysis.

Two MANOVA tests were conducted for this study. One test to examine the relationship between music, scent and a two-way interaction between music and scent on the dependent variables mentioned above, without the amount of time spent. Furthermore, a MANOVA test was conducted for the amount of time spent variables. Within the MANOVA, the statistic test Pillai's Trace was used. According to Glen (2016) this test can be considered as the most powerful and robust statistic for general use. The outcome of the MANOVA tests are shown in Table 7 and 8. Furthermore, the overall means and standard deviations for each dependent variable are shown in Table 10.

Table 7

MANOVA of main, and interaction effects on dependent variables: emotional state, evaluation of the store, evaluation of the products and intention to revisit.

Effect	Value	F	Hypothesis DF	Error DF	Sig.	Partial Eta Squared
Music	.42	11.43	7	110	.00	.42
Scent	.11	1.99	7	110	.06	.11
Music * Scent	.25	5.12	7	110	.00	.25

**Pillai's Trace test was used*

Table 8

MANOVA of main, and interaction effects on dependent variable: amount of time spent

Effect	Value	F	Hypothesis DF	Error DF	Sig.	Partial Eta Squared
Music	.17	11.4	2	115	.00	.17
Scent	.13	.77	2	115	.47	.01
Music * Scent	.00	.18	2	115	.84	.00

**Pillai's Trace test was used*

For both MANOVA tests, an alpha level of .05 ($\alpha = .05$) was used. Concerning the dependent variables in Table 7, MANOVA confirmed that music has a statistically significant effect [F (7, 110) = 11.43, p = .00, n^2_p = .38]. Additionally, the main effect scent showed a marginally significant effect for the dependent variables [F (7, 110) = 1.99, p = .06, n^2_p = .11]. However, the interaction effect between music

and scent for the dependent variables has a statistically significant effect [F (7, 110) = 5.12, p = .00, n^2_p = .25].

Subsequently, concerning the dependent variable 'amount of time spent', MANOVA confirmed that music has a statistically significant effect [F (2, 115) = 11.4, p = .00, n^2_p = .17]. However, the main effect scent was shown as non-significant [F (2, 115) = .77, p = .47, n^2_p = .01]. Similarly, the interaction effect between music and scent was non-significant for the amount of time spent [F (2, 115) = .00, p = .84, n^2_p = .00].

For the purpose of finding out which specific dependent variables were statistically significant from music, scent and the interaction between music and scent, certain ANOVA tests were carried out. The outcomes of the ANOVAs are presented in Table 9.

Table 9
Univariate 2x2 ANOVA

Independent variable	**Dependent variable**	**Sum of squares**	**DF**	**Mean square**	**F**	**Sig.**	**Partial Eta Squared**
Music	Pleasure	.54	1	.54	1.32	.37	.37
	Arousal	19.19	1	19.19	67.37	.00	.00
	Dominance	.00	1	.00	.01	.00	.00
	Evaluation of the store environment	.02	1	.02	.06	.00	.00
	Evaluation of the products	.71	1	.71	2.85	.02	.02
	Intention to revisit	.04	1	.04	.08	.00	.00
	Estimated time spent	26.07	1	26.07	11.24	.00	.09
	Actual time spent	.01	1	.01	.01	.94	.00
	Processing fluency	.28	1	.28	.56	.01	.01
Scent	Pleasure	.41	1	.41	1.01	.32	.01
	Arousal	1.03	1	1.03	3.61	.06	.03
	Dominance	1.40	1	1.40	3.17	.78	.03
	Evaluation of the store environment	.51	1	.51	1.37	.24	.01
	Evaluation of the products	.51	1	.51	2.05	.16	.02
	Intention to revisit	.84	1	.84	1.68	.20	.01
	Estimated time spent	1.84	1	1.84	.79	.38	.01
	Actual time spent	.00	1	.00	.00	.96	.00
	Processing fluency	3.44	1	3.44	6.96	.01	.06
Music * Scent	Pleasure	7.16	1	7.16	17.50	.00	.13
	Arousal	3.07	1	3.07	10.78	.00	.09
	Dominance	4.10	1	4.10	9.23	.00	.07
	Evaluation of the store environment	11.01	1	11.01	29.56	.00	.20

Evaluation of the products	3.44	1	3.44	13.74	.00	.11
Intention to revisit	.72	1	.72	1.48	.23	.01
Estimated time spent	.09	1	.09	.04	.85	.00
Actual time spent	.26	1	.26	.28	.60	.00
Processing fluency	3.43	1	3.43	6.94	.01	.06

Table 10

Means and Standard Deviations on the dependent variables for all conditions

Dependent variable	**M**	**SD**	**M**	**SD**
	Low arousal music (N=91)		High arousal music (N=88)	
Pleasure	3.80	.65	3.77	.67
Arousal	3.14	.51	3,80	.58
Dominance	3.25	.62	3.11	.67
Evaluation of the store environment	3.70	.65	3.63	.66
Evaluation of the products	3.83	.53	4.02	.51
Intention to revisit	4.14	.78	4.18	.69
Estimated time spent	2.40	1.13	3.18	1.74
Actual time spent	1.80	.84	1.81	1.18
Processing fluency	3.72	.79	3.75	.67`
Dependent variable	**M**	**SD**	**M**	**SD**
	Low arousal scent (N=59)		High arousal scent (N=61)	
Pleasure	3.84	.66	3.98	.70
Arousal	3.44	.74	3.64	.63
Dominance	3.36	.70	3.15	.67
Evaluation of the store environment	3.75	.68	3.90	.68
Evaluation of the products	3.93	.55	4.08	.51
Intention to revisit	4.22	.64	4.39	.64
Estimated time spent	3.02	1.74	2.79	1.42
Actual time spent	1.83	.87	1.82	1.05
Processing fluency	3.66	.83	4.02	.59

Prior to analyze the outcomes of the several ANOVA univariate analyses, the Bonferroni adjusted alpha level was calculated. This for the reason to prevent potential errors when performing several tests on a single dataset. Regarding this the significance of the univariate ANOVAs on the Bonferroni was measured, by dividing the alpha level ($\alpha = .05$) by the number of dependent variables. In this study, the overall number of dependent variables is eight. Thus, the Bonferroni adjusted alpha level resulted in .006 and will be used instead of the alpha level of .05.

5.4 ANOVA

Pleasure

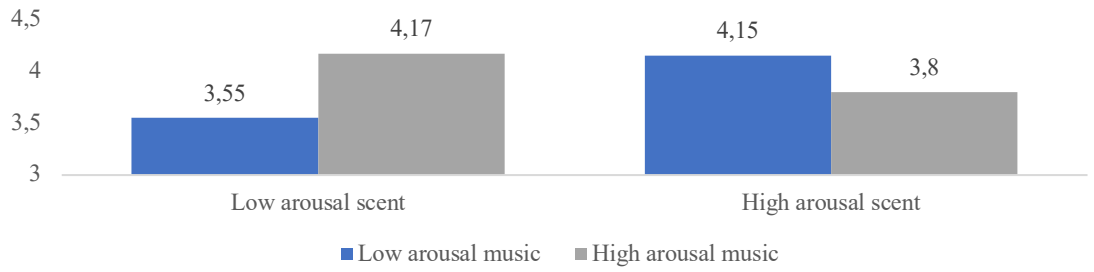

Figure 6. Means scores conditions on pleasure

Initially, ANOVA showed a significant difference between the different conditions [F (5, 173) = 19.11, p = .00] for the variable pleasure. The condition low arousal scent/high arousal music is the most pleasant condition (M = 4.17, SD = .59) and is statistically different than the low arousal scent/low arousal music condition (p = .00). However, Bonferroni showed a non-significant difference between the two high arousal scent conditions (p = .19). Table 9 showed a non-significant effect for both the main effect music and scent on pleasure. However, the interaction between music and scent showed a statistically significant effect (p = .00) on pleasure.

Arousal

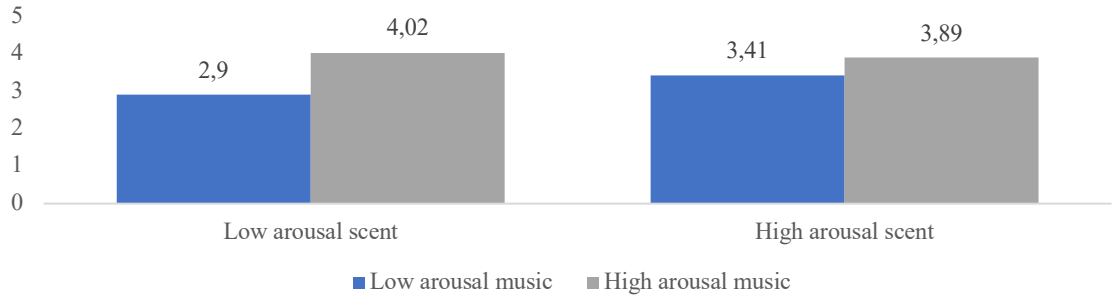

Figure 7. Mean scores conditions on arousal

Next, ANOVA showed a significant difference between the different conditions [F (5, 173) = 21.65, p = .00] for the variable arousal. The condition low arousal scent/high arousal music had the highest mean on arousal (M = 4.02, SD = .56) and is statistically different than the low arousal scent/low arousal music condition (p = .00). Moreover, Bonferroni revealed a statistically significant difference between the two high arousal scent conditions (p = .00). Table 9 showed a marginally significant effect for both the main effect music and scent on arousal. Also, the interaction effect between music and scent showed a statistically significant effect.

Dominance

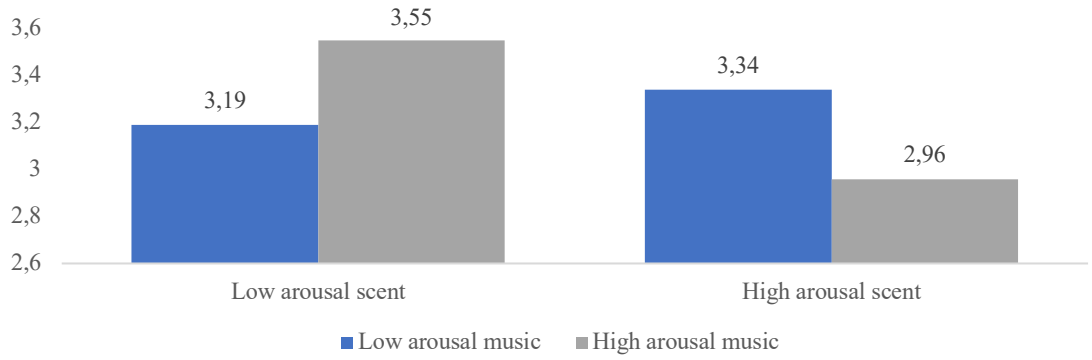

Figure 8. Mean scores conditions on dominance

For the variable dominance, ANOVA showed a significant difference between the different conditions [F (5, 173) = 5.03, p = .00]. The condition low arousal scent/high arousal music had the highest mean on arousal (M = 3.55, SD = .67) and is not significantly different than the low arousal scent/low arousal music condition (p = .25). Moreover, Bonferroni revealed a non-significant difference between the two high arousal scent conditions (p = .17). Table 9 showed a significant effect for the main effect music on dominance. Also, the interaction effect between music and scent showed a statistically significant effect. However, there was a non-significant effect for the main effect scent on dominance (p = .78).

Evaluation of the store

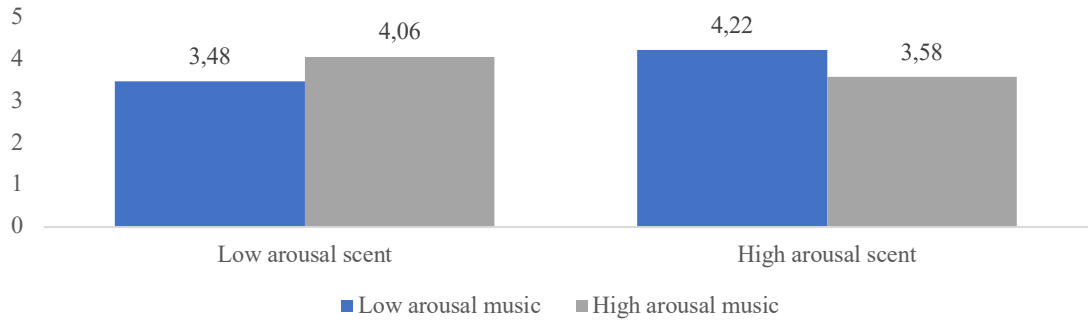

Figure 9. Mean scores conditions on evaluation of the store

Subsequently, ANOVA showed a significant difference between the different conditions [F (5, 173) = 13.60, p = .00] for the variable evaluation of the store. The condition high arousal scent/low arousal music had the highest mean on evaluation of the store (M = 4.22, SD = .55) and is statistically significantly different than the low arousal scent/low arousal music condition (p = .00). Moreover, Bonferroni revealed a significant difference between the two high arousal scent conditions (p = .00). Table 9 showed a significant effect for the main effect music on evaluation of the store. Also, the interaction effect between music and scent showed a statistically significant effect. However, there was a non-significant effect for the main effect scent on evaluation of the store (p = .24).

Evaluation of the products

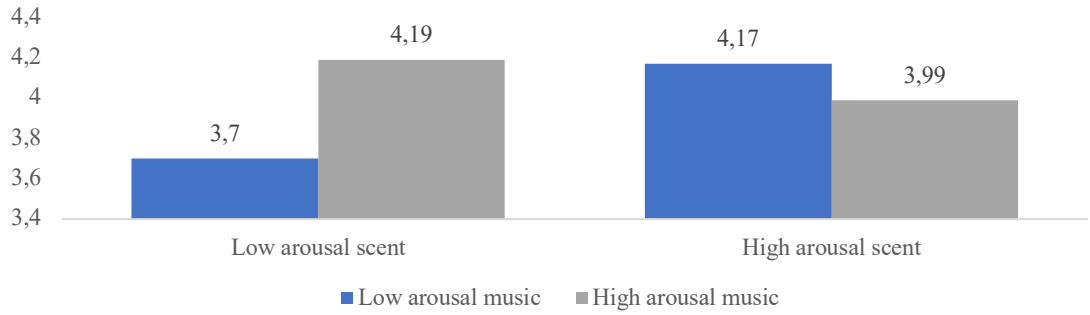

Figure 10. Mean scores conditions on evaluation of the products

For the variable evaluation of the products, ANOVA showed a significant difference between the different conditions [F (5, 173) = 7.08, p = .00]. The condition low arousal scent/high arousal music had the highest mean on evaluation of the product (M = 4.19, SD = .54) and is statistically different than the low arousal scent/low arousal music condition (p = .00). However, Bonferroni showed a non-significant difference between the two high arousal scent conditions (p = .91). Table 9 showed a significant effect for the main effect music on evaluation of the products. Also, the interaction effect between music and scent showed a statistically significant effect. However, there was a non-significant effect for the main effect scent on evaluation of the products (p = .16).

Intention to revisit

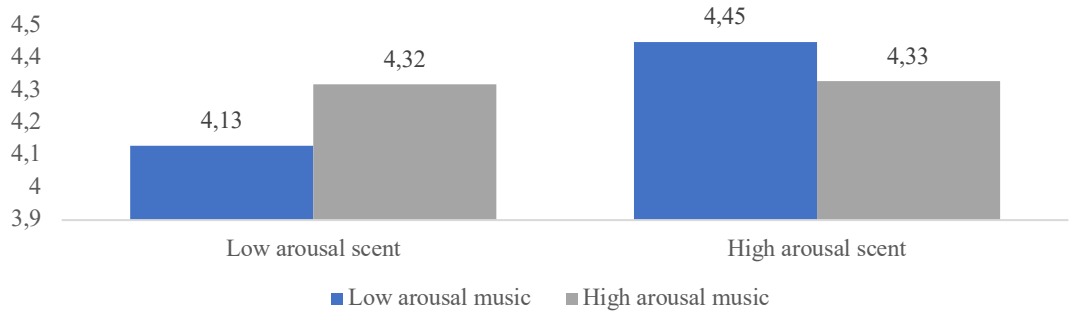

Figure 11. Mean scores conditions on intention to revisit

Eventually, ANOVA showed a significant difference between the different conditions [F (5, 173) = 3.80, p = .00] for the variable intention to revisit. The condition high arousal scent/low arousal music had the highest mean on intention to revisit (M = 4.45, SD = .57) and is not significantly different than the high arousal scent/high arousal music condition (p < .05). Moreover, Bonferroni showed a non-significant difference between the two low arousal scent conditions (p < .05). Table 9 showed a significant effect for the main effect music on intention to revisit. However, there was a non-significant effect for the main effect scent (p = .20) and the interaction effect between music and scent (p = .23).

Amount of time spent

ANOVA showed that music has a statistically significant effect on the consumers estimated time spent in store [F (1, 346) = 1.75, p = .00, n^2_p = .07]. However, the effect of music on the actual time spent is non-significant (p =.96). Because of the fact that music tempo has two conditions, low arousal music and high arousal music, a post hoc test could not be carried out. Moreover, the means and standard deviations from Table 10, will be used to argue whether the effect of music tempo on time spent in store is significant or not. The high arousal music resulted in a longer estimation of time spent in store (M = 3.18, SD = 1.74) in comparison with the low arousal music (M = 2.40, SD = 1.13). The time was notated in minutes, thus for the high arousal music it is 3.18 minutes and for the low arousal music 2.40 minutes. Based on this information, hypothesis 2 is not confirmed.

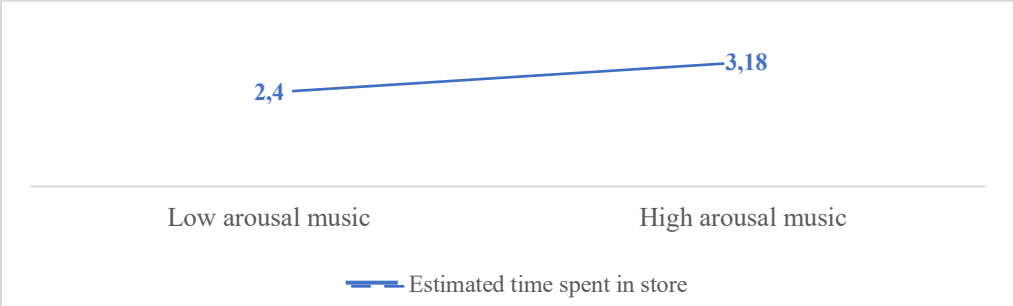

Figure 12. Estimated time spent in store low vs. high arousal music

To conclude, overall the incongruent conditions had the highest means for the dependent variables. As shown in all figures, the pattern of the columns is generally the same. With the exception of the variable 'arousal'. For the variables pleasure, arousal, dominance and evaluation of the product, the condition low arousal scent/high arousal music had the highest mean. Further, for the variables evaluation of the store and intention to revisit, the condition high arousal scent/low arousal music had the highest mean. The conditions with no scent scored significantly lower. Also the condition low arousal scent/low arousal music had low mean scores on the dependent variables.

5.5 Regression

To find out if processing fluency mediates the effect of music/scent congruence on the dependent variables, a mediation analysis with the use of process will be carried out (Hayes, 2000). In Figure 13, the three different paths are shown. First, path A shows the relation between the conditions and processing fluency. The mediation analysis showed a non-significant effect between the conditions and processing fluency [F (1,177) = 1,14, p = .29, R^2 = .00], so the condition does not predict processing fluency. Second, path B shows the relation of the conditions and processing fluency predicting the dependent variables. Overall this relation is significant [F (2,176) = 18,05, p = .00, R^2 = .17], however when looking to the conditions and processing fluency separate, the outcome changes. Path B is

significant (b = -.18, t(176) = 4.46, p = .00), which means that processing fluency predicts the outcome of the dependent variables. However, path C' is significant b = -.06, t(176) = -3.66, p = .00), but was expected to be non-significant. This means that the conditions still predict the outcome of the dependent variables. Last, path C shows us the relation between the conditions and the dependent variables. The effect is significant ([F (1,177) = 14,64, p = .00, R^2 = .08]. To conclude, this means that when the conditions do not predict processing fluency there is no ground for mediation. This means that based on this information hypothesis 4 cannot be confirmed.

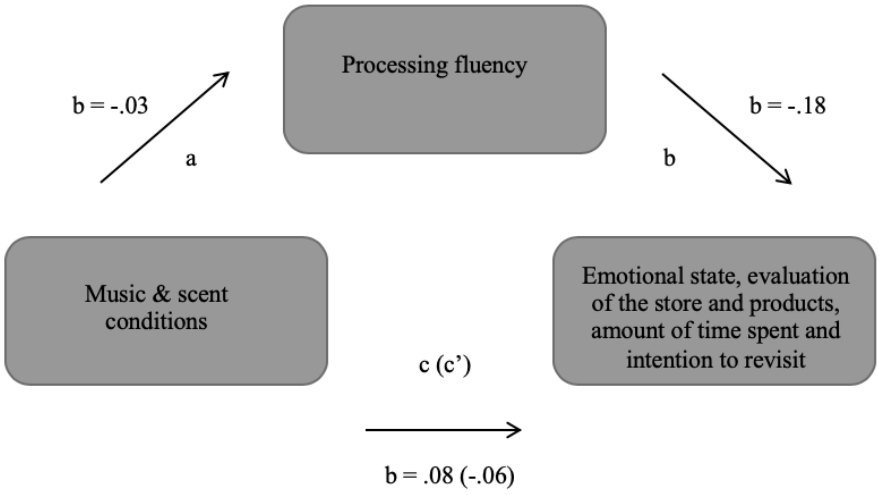

Figure 13. Mediation analysis with dependent, independent variables and mediator

5.6 Overview of tested hypotheses

Table 11
Overview of the tested hypotheses

Hypotheses		Supported
H1a	The presence of a high arousal scent in comparison with a low arousal scent will have a positive influence on the consumers' emotional state.	No
H1b	The presence of a high arousal scent in comparison with a low arousal scent will have a positive influence on the consumers' evaluation of the store environment.	Yes
H1c	The presence of a high arousal scent in comparison with a low arousal scent will have a positive influence on the consumers' evaluation of the products.	Yes
H1d	The presence of a high arousal scent in comparison with a low arousal scent will have a positive influence on the consumers' amount of time spent in the store.	No
H1e	The presence of a high arousal scent in comparison with a low arousal scent will have a positive influence on the consumers' intention to revisit.	Yes
H2a	The presence of low arousal music in comparison with high arousal music, will have a positive influence on the consumers' emotional state.	Partly (arousal)
H2b	The presence of low arousal music in comparison with high arousal music, will have a positive influence on the consumers' evaluation of the store environment.	No
H2c	The presence of low arousal music in comparison with high arousal music, will have a positive influence on the consumers' evaluation of the products.	No
H2d	The presence of low arousal music in comparison with high arousal music, will have a positive influence on the consumers' amount of time spent in the store.	No
H2e	The presence of low arousal music in comparison with high arousal music, will have a positive influence on the consumers' intention to revisit.	No
H3a	Moderate incongruence (high vs. low arousal) between music and scent in contrast to congruence, will have a more positive influence on the consumers' emotional state.	Yes
H3b	Moderate incongruence (high vs. low arousal) between music and scent in contrast to congruence, will have a more positive influence on the consumers' evaluation of the store environment	Yes
H3c	Moderate incongruence (high vs. low arousal) between music and scent in contrast to congruence, will have a more positive influence on the consumers' evaluation of the products.	Yes
H3d	Moderate incongruence (high vs. low arousal) between music and scent in contrast to congruence, will have a more positive influence on the consumers' amount of time spent in store.	Yes
H3e	Moderate incongruence (high vs. low arousal) between music and scent in contrast to congruence, will have a more positive influence on the consumers' intention to revisit.	Yes
H4	Processing fluency mediates the effect of music/scent (in)congruence on consumers' emotional state, evaluation of the store environment and products, amount of time spent in the store and intention to revisit.	No

6. Discussion

The aim of this study was to examine whether congruence or incongruence between music and scent in the Kees Smit showroom affected the consumer responses positively. For this research objective, the following research question was proposed: “To what extent does congruence or incongruence between scent and music affect the consumer responses for the visitors of the Kees Smit showroom?”. To answer this research question, an experimental research design and four hypotheses were used.

6.1 Discussion of results

Effect of music

First, results showed that the low arousal and high arousal music were significant different, with the high arousal condition being perceived as significantly more arousing than the low arousal condition. The study of Milliman (1982) showed that grocery store shoppers who were exposed to slow music spent 38% more time in the store. For the low and high arousal music, the tempo of the music is the most determining factor. Therefore, it was expected in hypothesis 2 that low arousal music would have a positive influence on the amount of time consumers spent in store. Interestingly, the effect of music on the actual amount of time spent in the store was non-significant but was significant on the estimated time spent in the store. Consumers who were exposed to the high arousal music, have estimated their time in the store at 3.18 minutes, compared to 2.40 minutes for the low arousal music. Hence, Kellaris and Kent (1991) showed that people perceive the duration of fast tempo (high bpm) music as longer than slow tempo music (low bpm). Likewise, Kellaris and Altsech (1992) have shown that high arousal music, in comparison to low arousal music, is perceived as longer in duration. Also, Gulas & Schewe (1994), suggest that familiar music, in contrast to unfamiliar music, can ensure that visitors spend less time in the store but perceive themselves as spending more. It could be possible that the high arousal music was more familiar for the 179 participants of this study than the low arousal music. Within the questionnaire, no question was asked about the familiarity with the song. To conclude, these results show that people over-estimate their time when being exposed to high arousal music. The results of this study have the same outcomes, but there is no difference between the conditons in actual time spent. Therefore, hypothesis 2 was not supported.

Effect of scent

Second, the main effect scent was researched by dividing the condition scent into three categories: no scent, low arousal scent (Cherry Blossom) and high arousal scent (Classic Spice). The no scent condition was used as a control condition. Different factors play a role when diffusing an ambient scent, but Engen (1982) states that the most important attribute of an ambient scent is its pleasantness or unpleasantness. Both the low arousal as the high arousal scent scored the same on pleasantness in the pre-test. According to Spangenberg et al. (1996), scents in the categories citrus and mints are evaluated as more pleasant

and arousing than the other scent categories. Therefore, it was hypothesized that the presence of a high arousal scent in comparison with a low arousal scent will have positive influence towards the consumers' emotional state, evaluation of the store environment and products, amount of time spent in the store and intention to revisit. Results showed that the main effect scent was marginally significant for the dependent variables. However, the preliminary analysis showed a non-significant difference between the conditions with low arousal scent and high arousal scent. As expected, the low arousal scent had a lower mean for arousal than the high arousal scent. Also, the low arousal scent had a higher mean than the no scent conditions.

Interaction between scent and music

The outcome of the MANOVA test also included the interaction effect between music and scent. The interaction effect between music and scent for the dependent variables has a statistically significant effect, but the effect was non-significant for the variable amount of time spent. The premise of this study was the study Mandler (1982), which argues that congruity will have a positive outcome, but the intensity of this affective value is not high. To achieve this higher affective value incongruity is necessary: slight or severe. Therefore, within this study there was strived for slight incongruity for a positive affective value. The outcomes of the several 2x2 ANOVA tests were unambiguously, because the incongruent conditions affected the dependent variables the most positive. First, the condition low arousal scent/high arousal music had the highest mean scores on the dependent variable emotional state (pleasure, arousal and dominance) and evaluation of the product. Second, the condition high arousal scent/low arousal music had the highest means scores evaluation of the store and intention to revisit. Based on these results, we can state that the incongruent conditions have a more positive influence towards the dependent variables than the congruent conditions.

Role of processing fluency

According to Schwarz (2004) processing fluency is an important factor to process the sensory cues in the store environment. The basics of the process fluency theory are used over the last years in marketing research. The theory has been applied to different advertisements and product labels, but none of the researches explore the effect of processing fluency in the domain of scent (Hermann, Zidansek, Sprott & Spangenberg, 2013). Therefore, in this study it was hypothesized that processing fluency mediates the effect of music/scent congruence on the consumers' emotional state, evaluation of the store environment and products, amount of time spent in the store and intention to revisit. Hence, a regression analysis was carried out. The outcome was that processing fluency does not mediate the effect of music/scent congruence on the dependent variables. However, processing fluency predicts the outcome of the dependent variables, similarly as the independent variables within this study. Based on these results, hypothesis 4 could not be supported.

6.2 Limitations for further research

This study has several limitations and recommendations for future research and will be explained in this section. First, the setting of this study was a specific store namely a garden furniture store. The data collection took place in the showroom in Almelo and Amersfoort. This specific setting could influence the outcomes of this study. For instance, a study for a big clothing store with another target audience may have very different results. Other studies can use this study as an example of how sensory marketing can influence the shopping experience. Second, the respondents of this study were visitors of the Kees Smit Tuintrend event, which means that also a lot of friends and family of Kees Smit employees attended this event. Therefore, this could influence the outcomes of the study because they could be biased and perhaps more positive about Kees Smit. A study with only customers on a normal day in the showroom could have different outcomes. Third, the scents that are used in this study are 18 scents from the company AirAroma. Therefore, a replication of this study with completely other scents could result in other outcomes. Fourth, the music that is being selected for the pre-test is done by the researcher. The taste of music and personal preference may have influenced the 18 selected songs. Within this study, almost all the songs where pop songs. Future studies could use only unknown songs so respondents cannot be influenced if they are already familiar with the song in a positive or negative way. Fifth and last, the VR experience within this study could affect the outcomes because people can be afraid when putting on the VR glasses. Also, this new experience could distract the participants from looking at the environment, because of being afraid, laughing and other emotions they might have experienced.

6.3 Implications

6.3.1 Practical implications

This study had the intention to give retailers more knowledge about the use of sensory marketing, with the focus on music and scent. The outcome of this study gives insights in the use of more than one sensory cue, congruent or incongruent. With this information, retailers can examine how sensory marketing significantly affects the shopping experience in this study.

Regarding the results of this study, incongruent conditions turned out to have a positive influence on the shopping experience of the visitors in contrast to congruent conditions. This shopping experience exists out of several variables that altogether determine if the shopping experience felt positive or negative. The use of incongruent conditions has a significant difference to all dependent variables, but overall the interaction of music and scent does not have a significant effect on intention to revisit, amount of time spent and processing fluency. Therefore, retailers need to make use of other resources to decrease the estimated time spent in store. Thus, enough staff to help the customers so they need to spend less time on waiting for help. This will decrease the estimated time in store, but overall an increase in the actual time spent in store. This actual time spent, is then spent usefully and leads hopefully to an increase in sales.

Specifically, scent alone in comparison to music does not affect the shopping experience more positive. However, the interaction between music and scent leads to significant effects on the dependent variables. Especially for the variable pleasure, that has a non-significant effect for music and scent alone but a significant effect for the interaction effect. Therefore, retailers must not focus on only one sensory cue but applying two or more sensory cues that can reinforce each other. Equally to this study, this can be music and scent, but other sensory cues like colors or touch. Also, moderation is an important aspect when it comes to the use of sensory cues. If music, scent, colors or other cues are too overwhelming, this can work negatively. For retailers it is important to strive for the most positive outcome which means they need to try and see where the thin line is between a very positive outcome or a negative outcome because it is too overwhelming.

6.3.2 Theoretical implications

In the past, much research is done into the effects of sensory marketing, but most of the time it was only focused on one sensory cue: music, scent, light, et cetera (Matilla & Wirtz, 2001; Milliman, 1982; Yalch & Spangenberg, 1990). Thus, a lot is known about individual sensory stimuli, but not many researched how they might interact and whether to aim for incongruence or congruence between those sensory cues. Also, the interaction was in most cases between the sensory cue(s) and the store environment. Therefore, this study was unique because of the main effects and interaction between two sensory cues in a setting that differed from a normal store: large showrooms with garden furniture. Also the buying behavior is different from other stores, because of the high prices the chance of impulse purchases is smaller compared to a grocery store. Outcomes of this study can be used as a starting point to study the effects of scent and music (in)congruence on shopping experience in other settings.

6.4 Conclusion

This study examined whether the congruence or incongruence between music and scent in showrooms affected consumer responses positively. The most important result of this study is that incongruence between music and scent affects the consumer responses the most positive. Thus, the incongruent conditions provided the highest mean scores on emotional state, evaluation of the store and products and intention to revisit. Of the two incongruent conditions, the condition low arousal scent and high arousal music affected the shopping experience the most positive. Based on these results, this low arousal scent could be diffused in the showrooms of Kees Smit. For music, it is important that the used songs are selected based on their level of arousal. With a beats per minute (BPM) between 140-150, the songs will be equally arousing as the songs within this study. In the end, this combination of scent and music will ensure the most pleasant shopping experience for the visitors of the showrooms.

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Appendix I – Pre-test Scent

Beste deelnemer,

Als student Communication Studies aan de Universiteit van Twente, doe ik voor mijn masterthesis onderzoek naar de winkelbeleving van consumenten. Fijn dat u wilt deelnemen aan mijn onderzoek.

Tijdens het onderzoek gaat u 18 verschillende geuren ruiken. Na het ruiken van iedere geur beantwoordt u vragen. In de vraag staat welke geur (1 t/m 18) u moet pakken en vervolgens zal ruiken. Bij het geven van de antwoorden is het advies om niet te lang na te denken, maar op uw gevoel af te gaan.

Mocht u achteraf nog vragen hebben, dan mag u deze meteen stellen of mailen naar l.dreijerink@student.utwente.nl.

Bedankt voor uw medewerking.

Lauri Dreijerink

---

1. Wilt u deelnemen aan dit onderzoek? (ja/nee)
2. Wat is uw geslacht?
3. Wat is uw leeftijd?
4. Rookt u? (ja/nee)

U zult zometeen de opdracht krijgen om de 18 geuren in een bepaalde volgorde te ruiken. Houd deze volgorde ook aan.

Geur 1 – Cedar Mood

Beschrijf het gevoel die u krijgt bij het ruiken van geur 1:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 2 – Lemongrass Tea

Beschrijf het gevoel die u krijgt bij het ruiken van geur 2:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen

Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 3 - Longboard

Beschrijf het gevoel die u krijgt bij het ruiken van geur 3:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 4 – Vanilla Lace

Beschrijf het gevoel die u krijgt bij het ruiken van geur 4:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 5 – White Tea

Beschrijf het gevoel die u krijgt bij het ruiken van geur 5:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 6 – Fresh Grass

Beschrijf het gevoel die u krijgt bij het ruiken van geur 6:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 7 – Sencha:

Beschrijf het gevoel die u krijgt bij het ruiken van geur 7:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 8 – Cherry Blossom

Beschrijf het gevoel die u krijgt bij het ruiken van geur 8:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 9 – Thé Vert Oriental

Beschrijf het gevoel die u krijgt bij het ruiken van geur 9:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 10 – Vetiver Rain

Beschrijf het gevoel die u krijgt bij het ruiken van geur 10:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 11 - Illuminate

Beschrijf het gevoel die u krijgt bij het ruiken van geur 11:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 12 – Fig Essence

Beschrijf het gevoel die u krijgt bij het ruiken van geur 12:

Ontspannen	○	○	○	○	○	Gestimuleerd

Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

<u>Geur 13 – Amber Grand</u>

Beschrijf het gevoel die u krijgt bij het ruiken van geur 13:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

<u>Geur 14 – Orange Blossom</u>

Beschrijf het gevoel die u krijgt bij het ruiken van geur 14:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

<u>Geur 15 – Rainforest</u>

Beschrijf het gevoel die u krijgt bij het ruiken van geur 15:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd

Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 16 – Zesty Champaca

Beschrijf het gevoel die u krijgt bij het ruiken van geur 16:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 17 – Guava Cucumber

Beschrijf het gevoel die u krijgt bij het ruiken van geur 17:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Geur 18 – Classic Spice

Beschrijf het gevoel die u krijgt bij het ruiken van geur 18:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Door deze geur voel ik mij:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Hoe plezierig vond u deze geur?

Heel plezierig	○	○	○	○	○	Heel onplezierig

Appendix II – Pre-test music

Beste deelnemer,

Als student Communication Studies aan de Universiteit van Twente, doe ik voor mijn masterthesis onderzoek naar de invloed van muziek op de winkelervaring. Fijn dat u wilt deelnemen aan mijn onderzoek.

Tijdens het onderzoek luistert u naar 18 verschillende muziekfragmenten. Na ieder fragment beantwoordt u een aantal vragen. Het fragment speelt vanzelf af, maar het is belangrijk om het geluid aan te zetten. Bij het geven van de antwoorden is het advies om niet te lang na te denken, maar op uw gevoel af te gaan.

Mocht u achteraf nog vragen hebben, dan mag u deze mailen naar l.dreijerink@student.utwente.nl.

Bedankt voor uw medewerking.
Lauri Dreijerink

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1. Wilt u deelnemen aan dit onderzoek? (ja/nee)
2. Wat is uw geslacht?
3. Wat is uw leeftijd?

Muziekfragment 1: Kodaline – High Hopes (77bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 2: John Legend – Ordinary People (67 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 3 - Whitney Houston – I will always love you (67 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker

6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 4: Tom Odell – Heal (74 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 5: Daniel Caesar – We find love (78 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 6: Passenger – Simple song (78 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 7: James Arthur – Train Wreck (77 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd

2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 8: Sheppard – Geronimo (142 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 9: Maroon 5 – Harder to breath (150 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 10: Paolo Nutini – New Shoes (150 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 11: The Vamps – All night (145 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 12: Kings of Leon – Sex on fire (153 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 13: OneRepublic – Secrets (148 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 14: Zara Larsson – Never forget you (146 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden

2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 15: Christina Aguilera – I Am Beautiful (76 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 16: Coldplay – Viva la vida (138 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 17: Birdy – Tee Shirt (76 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker
6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Muziekfragment 18: Shawn Mendes (150 bpm)

Beschrijf het gevoel dat u krijgt bij het luisteren naar deze muziek:

1.	Ontspannen	○	○	○	○	○	Gestimuleerd
2.	Rustig	○	○	○	○	○	Opgewonden
3.	Traag	○	○	○	○	○	Waanzinnig
4.	Saai	○	○	○	○	○	Opgejaagd
5.	Slaperig	○	○	○	○	○	Wakker

6.	Bedroefd	○	○	○	○	○	Opgewekt

Door deze muziek voel ik mij:

1.	Ontevreden	○	○	○	○	○	Tevreden
2.	Wanhopig	○	○	○	○	○	Hoopvol
3.	Verveeld	○	○	○	○	○	Ontspannen
4.	Ongelukkig	○	○	○	○	○	Gelukkig
5.	Geïrriteerd	○	○	○	○	○	Blij

Appendix III – Results Pre-test Scent and Music

Table 2
Results pre-test scent

Scent	Mean (arousal)	Standard Deviation (arousal)	Mean (pleasure)	Standard Deviation (pleasure)
Cedar Mood	3,54	0,61	3,64	0,79
Lemongrass Tea	3,17	0,85	3,07	0,89
Longboard	3,00	0,82	3,14	0,84
Amber Grand	3,15	0,82	4,07	0,60
Cherry Blossom	2,72	0,78	3,85	0,69
Classic Spice	4,15	0,49	3,93	0,78
Fig Essence	2,89	0,84	2,82	1,15
Fresh Grass	3,48	0,77	2,79	1,00
Guava Cucumber	3,51	0,94	3,12	0,85
Illuminate	3,56	0,58	3,74	0,66
Orange Blossom	3,37	1,05	1,89	0,73
Rainforest	3,22	0,84	3,82	0,92
Sencha	3,28	0,74	3,28	0,89
Thé Vert Oriental	3,39	0,84	3,62	0,83
Vanilla Lace	3,07	0,92	4,03	0,81
Vetiver Rain	3,55	0,60	3,10	0,95
White Tea	2,72	0,89	3,42	0,85
Zesty Champaca	3,63	0,68	3,52	0,86

Table 3
Results pre-test music

Music	BPM	Mean (arousal)	Standard Deviation (arousal)	Mean (pleasure)	Standard Deviation (pleasure)
The Vamps - All Night	145	3,43	0,54	3,32	0,79
Whitney Houston – I Will Always Love You	67	2,36	0,55	3,40	0,91
Sheppard – Geronimo	142	4,29	0,46	3,87	0,65
Maroon 5 - Harder to Breathe	150	3,97	0,80	2,97	0,83
Tom Odell – Heal	74	1,75	0,77	2,62	1,04
Kodaline - High Hopes	77	2,27	0,55	3,02	0,87
Christina Aguilera – Beautiful	76	2,80	0,73	3,00	0,95
Zara Larsson – Never forget you	146	4,13	0,44	3,62	0,69
Paolo Nutini - New Shoes	150	3,93	0,71	3,90	0,63
John Legend – Ordinary People	67	2,69	0,64	3,57	0,96
OneRepublic – Secrets	148	3,72	0,73	3,58	0,56
Kings of Leon - Sex on Fire	153	4,17	0,47	3,88	0,77
Passenger - Simple Song	78	2,27	0,49	3,26	1,03
Shawn Mendes - Stitches	150	4,16	0,60	3,86	0,70
Birdy - Tee Shirt	76	1,80	0,62	2,85	1,00
James Arthur - Train Wreck	77	2,26	0,71	2,98	0,92
Coldplay - Viva La Vida	138	3,64	0,82	3,50	1,05
Daniel Caesar - We Find Love	78	2,15	0,58	2,70	0,65

Appendix VI – Questionnaire Main Study

Beste bezoeker,
Als student Communication Studies aan de Universiteit van Twente, doe ik voor mijn masterthesis onderzoek naar de winkelbeleving van consumenten. Fijn dat u wilt deelnemen aan mijn onderzoek.

U heeft net de showroom van Kees Smit ontdekt in virtual reality. Over deze ervaring stel ik u graag een aantal vragen, verdeeld over verschillende onderwerpen. Bij ieder onderwerp zijn er meerdere stellingen. Belangrijk is dat u bij iedere stelling 1 antwoord aankruist, zoals in het onderstaande voorbeeld.

Uitleg
Het meest linker antwoord bij de eerste vraag is 'Boos', daarna volgt: een beetje boos, neutraal, een beetje blij en blij. Het zwarte bolletje geeft dus aan: Een beetje blij.

Voorbeeldvraag 1:

Boos	○	○	○	•	○	Blij
Arm	○	○	•	○	○	Rijk
Ongelukkig	○	○	•	○	○	Gelukkig

Bedankt voor uw medewerking.
Lauri Dreijerink

Beschrijf het gevoel dat u krijgt van uw bezoek aan de virtuele winkelomgeving:

Ontspannen	○	○	○	○	○	Gestimuleerd
Rustig	○	○	○	○	○	Opgewonden
Traag	○	○	○	○	○	Waanzinnig
Saai	○	○	○	○	○	Opgejaagd
Slaperig	○	○	○	○	○	Wakker
Bedroefd	○	○	○	○	○	Opgewekt

Beschrijf het gevoel dat u krijgt van uw bezoek aan de virtuele winkelomgeving:

Ontevreden	○	○	○	○	○	Tevreden
Wanhopig	○	○	○	○	○	Hoopvol
Verveeld	○	○	○	○	○	Ontspannen
Ongelukkig	○	○	○	○	○	Gelukkig
Geïrriteerd	○	○	○	○	○	Blij

Beschrijf het gevoel dat u krijgt van uw bezoek aan de virtuele winkelomgeving:

Onderdanig	○	○	○	○	○	Dominant
Verzorgd	○	○	○	○	○	In controle
Geleid	○	○	○	○	○	Autonoom
Beïnvloed	○	○	○	○	○	Invloed

Beschrijf wat uw indruk is van de virtuele winkelomgeving:

Onaantrekkelijk	○	○	○	○	○	Aantrekkelijk
Gespannen	○	○	○	○	○	Ontspannen
Oncomfortabel	○	○	○	○	○	Comfortabel
Somber	○	○	○	○	○	Vrolijk
Kleurloos	○	○	○	○	○	Kleurrijk
Negatief	○	○	○	○	○	Positief
Saai	○	○	○	○	○	Boeiend
Eentonig	○	○	○	○	○	Levendig
Demotiverend	○	○	○	○	○	Motiverend
Niet interessant	○	○	○	○	○	Interessant
Onaangenaam	○	○	○	○	○	Aangenaam
Gesloten	○	○	○	○	○	Open
Dof	○	○	○	○	○	Helder

Beschrijf wat u vindt van de producten die in de virtuele winkelomgeving worden verkocht:

Slecht	○	○	○	○	○	Goed

Onplezierig	○	○	○	○	○	Plezierig
Ongunstig	○	○	○	○	○	Gunstig
Lage kwaliteit	○	○	○	○	○	Hogekwaliteit
Onaantrekkelijk	○	○	○	○	○	Aantrekkelijk
Slechte prijs	○	○	○	○	○	Goede prijs
Verouderd	○	○	○	○	○	Nieuw

Hoeveel tijd denkt u dat u in de virtuele winkelomgeving heeft doorgebracht? (Geef uw beste schatting zonder naar uw horloge te kijken)
____minuten

Hoe plezierig was de tijd die u hebt doorgebracht in de virtuele winkelomgeving?
Heel onplezierig ○ ○ ○ ○ ○ Heel plezierig

Ervan uitgaande dat u op zoek bent naar tuinmeubelen en/of accessoires en u hebt geld had, hoe waarschijnlijk zou u de winkel opnieuw bezoeken?
Heel onwaarschijnlijk ○ ○ ○ ○ ○ Heel waarschijnlijk

Het bestuderen van de virtuele winkelomgeving was:

Moeilijk	○	○	○	○	○	Makkelijk
Ongelijkmatig	○	○	○	○	○	Vloeiend
Onbegrijpelijk	○	○	○	○	○	Begrijpelijk
Onduidelijk	○	○	○	○	○	Duidelijk
Inspannend	○	○	○	○	○	Moeiteloos

Wat vindt u van het tempo van de muziek die u hoorde in de virtuele winkelomgeving?
Zeer langzaam ○ ○ ○ ○ ○ Zeer snel

Wat vindt u van de achtergrondmuziek die u hoorde in de virtuele winkelomgeving?

Onaantrekkelijk	○	○	○	○	○	Aantrekkelijk
Onaangenaam	○	○	○	○	○	Aangenaam
Onplezierig	○	○	○	○	○	Plezierig
Negatief	○	○	○	○	○	Positief
Niet stimulerend	○	○	○	○	○	Stimulerend

Wat vindt u van de geur die u rook in de virtuele winkelomgeving?

Onaantrekkelijk	○	○	○	○	○	Aantrekkelijk
Onaangenaam	○	○	○	○	○	Aangenaam
Onplezierig	○	○	○	○	○	Plezierig
Negatief	○	○	○	○	○	Positief
Niet stimulerend	○	○	○	○	○	Stimulerend

Wat vindt u van het Kees Smit Tuintrend Event?
Heel slecht (0) 1 2 3 4 5 6 7 8 9 Heel goed (10)

Hoe waarschijnlijk zou u Kees Smit aanraken aan vrienden of familie?
Zeker niet (0) 1 2 3 4 5 6 7 8 9 Zeker wel (10)

Wat is uw geslacht?
○ Man
○ Vrouw
○ Overig

Wat is uw leeftijd?
_____ jaar

Rookt u?
○ Ja
○ Nee

Wat is uw hoogst genoten opleiding?
○ Geen/lager- of basisonderwijs
○ VMBO/MAVO/LBO
○ HAVO/VWO
○ MBO
○ HBO
○ WO (Universitair)

Wat is uw inkomen? (Een modaal inkomen is ongeveer 2800 euro bruto per maand)
○ Beneden modaal inkomen
○ Modaal inkomen
○ Boven modaal inkomen
○ Zeg ik liever niet